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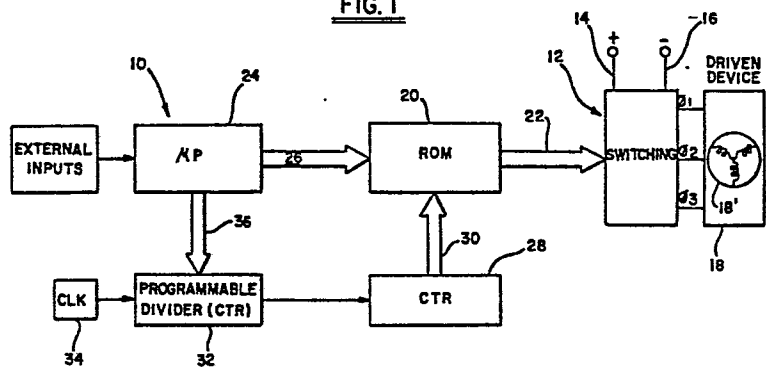
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(54) **Apparatus for providing a controlled power waveform.**

(57) A waveform synthesizer (10) for generating single or poly-phase waveforms of selected wave shape and frequency for driving AC machinery (18) including, for example, single or poly-phase induction, synchronous or other type motors or the like, includes a plurality of controllable powerswitching device pairs (12) for selectively switching power from an oppositely poled DC source (14,16) to the corresponding power utilizing circuits of the driven device. The switching device pairs are controlled to provide switched pulses of selected widths, spacings, and repetition rates to generate the desired current waveform. The power-switching device pairs are selectively switched by a control circuit that includes a microprocessor-controlled memory (20) that is divided into P addressable pages with each page including S sequentially accessible memory locations containing the switching device pairs control information necessary to synthesize the desired waveform. The microprocessor (24) is adapted to select one of the P available pages in response to prestored instructions, user input information, or condition-responsive transducer or similar information and, after selecting the desired page P, to control a presettable address counter (28) to sequentially access the S memory locations of the selected page P at a selected access

rate and to gate the so-accessed switching information to the power-switching device pairs to thereby synthesize the desired waveform.

FIG. 1





European Patent
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EUROPEAN SEARCH REPORT

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Application number

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
A	DE-A-2 829 793 (SIEMENS) * Page 8, paragraph 2 - page 13, paragraph 3 *	1	H 02 P 7/62 H 02 P 13/18
A	DE-B-2 831 589 (SIEMENS) * Column 2, line 11 - column 3, line 2 *		
P,A	Patent Abstracts of Japan Vol. 6, no. 176, 10 September 1982 & JP-A-57-91691		
			TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
			G 05 D 13/00 H 02 M 7/00 H 02 P 7/00 H 02 P 13/00 H 03 K 3/00
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 20-12-1983	Examiner GESSNER E A F
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	